

# A NEW AND INTERESTING SPECIES OF *CETHEGUS* THORELL (ISCHNOTHELINAE, DIPLURIDAE) FROM SOUTH AUSTRALIA

by

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## ABSTRACT

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A new species, *Cethegus ischnotheloides*, is described from South Australia. Males possess spine-like bristles on the palpal tarsi that are attenuate as in *Ischnothelini*.

## INTRODUCTION

Until recently, only three species of *Cethegus* were known from Australia (Main 1960). In a revision of Australian Ischnothelinae, Raven (1984) clarified the diagnostic characters of *Cethegus* and *C. fugax* (Simon) and described eight new species. Main (1960) included specimens from eastern South Australia in *C. fugax*. However, Raven (1984) included only specimens from southwestern Australia in that species. When Raven's study was completed, Mr David Lee, Senior Curator of Arachnids and Helminths at the South Australian Museum, presented me with two interesting males of *Cethegus* from central South Australia. One character of these males is unlike that of any other Australian ischnothelinid and requires amendment of the diagnosis of the Euagrini.

Abbreviations are standard for the Araneae and with methods used may be found in Raven (1984). All measurements are in millimetres except eye measurements that are in graticule units, each being 0.025 mm.

## SYSTEMATICS

Tribe Euagrini Raven, 1979

### Diagnosis

Diplurid spiders with long posterior lateral spinnerets with long apical segment; a hirsute pigmented cuticular crescent surrounds the base of the posterior median spinnerets. No cuspules on labium or maxillae. Spines present or absent on normal or attenuate male palpal tarsi. Cheliceral furrow with one row of teeth on promargin. Trichobothria with corrugiform collar around bases. Tarsal organ low.

### Remarks

Previously, the presence of spines on male palpal tarsi was known only for the western European genus *Phyxioschaema* in the Euagrini (Raven, 1981). However, only *Ischnothelini* (in the Dipluridae) have the characteristic extension of the male palpal tarsi (see Raven, 1983). In most Euagrini, palpal tarsi of males are short and truncate; in *Cethegus ischnotheloides*, the male palpal tarsi are 'spinose' and are slightly elongate apically (unlike other known *Cethegus*).

Tribe Euagrini Raven

*Cethegus ischnotheloides* n. sp.

(Figs 1-4) (Table 1)

### Diagnosis

Males with elongate embolus reaching proximal palpal patella; spine-like bristles present on attenuated palpal tarsi. Sternum with blunt hairs. Females unknown.

Holotype male SAM N1981 394

Carapace 6.56 long, 5.69 wide. Abdomen 5.38 long, 4.13 wide.

### Description:

*Colour in alcohol:* Carapace and legs reddish brown, chelicerae maroon. Abdomen entirely brown.

*Carapace:* Fovea short, semicircular, deep. Lateral margins with few weak lateral bristles. About 3 pairs of foveal bristles. Striae deep, glabrous. Clypeus 0.18 wide. Black hairs on interstrial ridges.

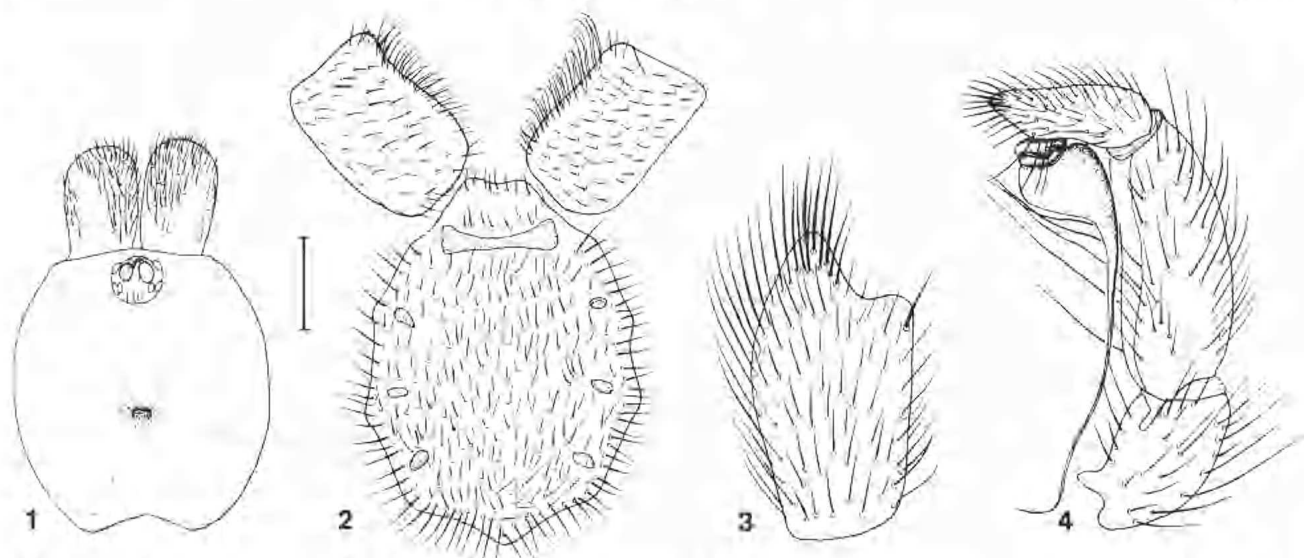
*Eyes:* On strongly raised tubercle; group is 0.27 times head-width, and is 1.59 times wider than long. Front row centres form strongly procurved line; back row centres form slightly procurved or straight line. Ratio of AME:ALE:PME:PLE, 18:14:11:13. Ratio of MOQ front width:back width:length, 30:33:28. Eye interspaces as AME diameters: AME-AME = ALE-PLE, 0.3; AME-ALE = PME-PLE, 0.05.

*Chelicerae:* With fine transverse dorsal ridges. Promargin with 4 large and 8 small teeth; basally with 2 fine teeth.

*Maxillae:* 1.80 long, 1.25 wide; with some short pointed setae; serrula ridge-like.

*Labium:* 0.63 long, 1.13 wide; groove broad and continuous.

*Sternum:* 3.52 long, 2.92 wide; all sigilla oval; posterior and middle sigilla 0.18 long and away from



FIGS. 1-4, *Cethegus ischnotheloides* n.sp. male holotype. 1. carapace and chelicerae. 2. sternum, maxillae and labium. 3. dorsal palpal tarsus showing attenuation and spine-like bristles. 4. retrolateral palpal patella, tibia and tarsus. Scale line = 2 mm for fig. 1; 1 mm for figs 2, 4; 0.5 mm for fig. 3.

margin; anterior sigilla 0.20 long and 0.25 away from margin. Setae long erect or short blunt.

**Palp:** Bulb pyriform; embolus long, tapering, extending to proximal patellae; tibia with slight ventral groove; tarsus slightly pointed with cluster of slender spine-like bristles.

**Legs:** Leg formula, 4321. Leg I smooth, cylindrical. Tarsi III and IV erect hairs forming weak scopula divided by setae. **Spines:** No true spines on femora or patellae. Leg 1: tibia, p1 v2; metatarsus, p2 v2; tarsus, v4. Leg 2: tibia, p2 v3; metatarsus, p3 v5; tarsus, v5. Leg 3: tibia, p3 d1 r3 v6; metatarsus, p11 r5 v8; tarsus d3 v7. Leg 4: tibia, p4 r4 v7; metatarsus, p9 d3 r5 v6; tarsus d4 v9. **Palp:** 0. **Claws:** 12 fine teeth on paired claws; 3 fine teeth on unpaired claw. **Trichobothria:** Two rows, each of 10, on tibiae; about 10, in a line on metatarsi; 8, of different length on tarsi in irregular row.

**Spinnerets:** Posterior medians 1.20 long, 0.36 in diameter and 0.68 apart; crescent of cuticle present as darkened area forming an anterior fold. Basal, middle, apical and total articles of posterior laterals, 1.92, 1.64, 2.04, 5.60 long respectively.

**Material examined:** Holotype male (N1981394), paratype male (N1981395), sand dunes, Commonwealth Hill Station, 29°57'S., 134°10'E., South Australia, April, 1981, P. Bird, R. Sinclair, deposited S.A.M.

**Distribution:** Central South Australia.

**Remarks:** Males of *Cethegus ischnotheloides* differ from those of *C. fugax* in the 'spinose' pointed palpal tarsi.

#### PHYLOGENETIC AND BIOGEOGRAPHIC SIGNIFICANCE

Inasmuch as males of *C. ischnotheloides* possess 'spinose' pointed palpal tarsi, they differ from males of all other Australian Euagrini and bear some resemblance to male Ischnothelini. However, because spinose male palpal tarsi are also found in genera of Masteriinae and Diplurinae, the presence of spines may be regarded either as a symplesiomorphy or a parallelism—a hypothesis involving their synapomorphy is falsified by the absence of cusps and the presence of corrugiform trichobothrial base collars in Euagrini. I here regard the presence of spinose palpal tarsi in Ischnothelinae as a plesiomorphic retention. However, parsimoniously, the attenuated palpal tarsus of males of *C. ischnotheloides* is presumably a parallelism otherwise *Cethegus* and *Ischnothele* are paraphyletic.

That a Western Australian euagrine should retain characters otherwise present only in Indian and Neotropical (*Ischnothele*) and Ethiopian (*Lathrothele* and *Thelechoris*) genera is probably predictable. Some geologists (e.g. Powell et al., 1981) propose that pre-drift India was in close contact with Western Australia. If that were so, some sharing of taxa dating to that period is to be expected. Spiders of the genus *Cethegus*, as defined by Raven (1984), are predominantly xerophilic although a number of species occur in northeastern Queensland. Throughout its range, to my knowledge, *Cethegus* is allopatric with other euagrine genera. I suggest that *Cethegus* represents a group that was first isolated in Australia as the most plesiomorphic

TABLE 1. LEG MEASUREMENTS OF *CETHEGUS ISCHNOTHELOIDES*.  
VALUES ARE FOR MALE HOLOTYPE.

	Leg I	Leg II	Leg III	Leg IV	Palp
Femur	5.13	5.06	5.00	6.25	3.44
Patella	2.94	2.81	2.81	3.19	1.94
Tibia	3.19	3.19	3.31	3.56	2.81
Metatarsus	4.69	5.06	5.94	6.44	—
Tarsus	2.25	2.69	3.19	3.75	1.69
Total	18.20	18.81	20.25	23.19	9.88

genus (that proposition will be discussed more completely elsewhere) and as such has retained characters of the presumed sister group of the Euagrini, the Ischnothelini. Therefore, *Cethegus ischnotheloides* may be the most plesiomorphic *Cethegus* species.

#### ACKNOWLEDGMENTS

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